PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE RALEIGH NC
800 AM EDT MON FEB 28 2011

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SEVERE WEATHER AWARENESS WEEK IN NORTH CAROLINA
FEBRUARY 27 - MARCH 05

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This week has been declared North Carolina's Severe Weather Awareness week for 2011.

Today we will define exactly what is a severe thunderstorm.

...Severe Thunderstorms...
In 2010 the National Weather Service redefined the hail criteria for severe thunderstorms. Hail stones must reach at least 1 inch in diameter, or the size of a quarter, to be classified as severe. Prior to this change hail that was three-quarters of an inch in diameter or penny sized was considered severe going back to the 1950s. The increase in severe hail criteria resulted in a reduction in the number of warnings issued in 2010 for hail. In fact in 2010 only 23 hail events in Central North Carolina produced hail quarter size or larger. On average only about 40 percent of all hail reported is quarter size or larger. The wind criteria for a severe thunderstorm...58 mph or greater...remained unchanged.

Over the last ten years there have been over 6000 reports of large hail and damaging wind statewide resulting in over thirteen million dollars in damage. Thunderstorms have also been responsible for a number of injuries and even deaths in the state resulting from lightning, high wind and tornadoes. The severe thunderstorm season in central North Carolina typically starts in March and does not end until late in the fall. Some of the most damaging storms occur from March through early July.

In 2010 warnings issued by National Weather Service continued to provide an average of 19 minutes lead time for severe wind and hail, with detection rate of ninety percent. The receipt of accurate and timely warnings is a vital part of any severe weather plan raising awareness when a significant threat is present. It is worth noting that the National Weather Service does not issue warnings for lightning and given the deadly nature of lightning you should always be aware of the lightning danger anytime a thunderstorm is nearby. A good rule of thumb to live by is when thunder roars…go indoors.

...Large Hail...
In the last 5 years severe thunderstorms in North Carolina have produced severe damaging hail from the size of hen eggs to baseballs across the piedmont and eastern North Carolina. While hail is not usually life threatening, these large chunks of ice cause serious damage to roofs, siding, windows, automobiles, and crops. The large hail season in central North Carolina typically runs from March through early July, typically peaking in May.

Hailstones grow in thunderstorms with strong updrafts. These strong upward moving currents of air keep the ice suspended inside the thunderstorm...allowing the chunks of ice or hailstones to grow larger and larger. The longer hail stones remain suspended in the hail growth region of the storm, the larger they become. Thunderstorm updrafts that show signs of rotation on radar are very effective at suspending hail since the internal velocities in rotating updrafts are higher that those of non rotating updrafts. Once the hail stone becomes too heavy for the updrafts to keep suspended...it falls to earth. During the warmer summer months…hail stones melt considerably as they fall losing size and mass before hitting the ground. This melting is the reason why we experience fewer large hail events from July through September.

...Damaging Wind...
Severe gusts of wind from a thunderstorm called downbursts or straight line winds are a serious danger. Nationally, over the last 30 years, nearly as many people have been killed by straight winds as from tornadoes. Thunderstorm wind gusts rush down from the storm sometimes reaching speeds in excess of 100 mph. Thunderstorm winds of this magnitude effect large areas creating widespread damage and injuries from flying debris. Straight line winds can cause damage equivalent to that of a tornado.

Dangerous lines of well organized thunderstorms...called squall lines...occasionally move across central North Carolina in the spring and early summer. These dangerous storm systems can be very explosive racing across the state at over 50 mph creating widespread wind damage over large areas. Hiding from the severe wind when it strikes is similar to taking shelter during a tornado.

Damaging wind events in central North Carolina typically start in March lasting into September. Damaging thunderstorm wind events are most notable from May through early August which is much longer and later into the summer when compared to the hail threat.

...Safety...
You can protect yourself during thunderstorms by remembering this phrase...hide from the wind and lightning. Stay away from windows when storms approach and seek shelter in an interior bathroom or closet when the wind really starts to blow. Your best line of defense against severe thunderstorms...is to stay informed. There are many great outdoor activities across the state of North Carolina and severe weather can bring a quick end to a day’s pleasure. Listen to NOAA weather radio, television or local radio for the latest forecasts and possible threat of thunderstorms and severe weather. If warnings are issued...take action and protect your family and property. Being safe is a lot better than being sorry.

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NWS Warning Criteria… http://www.erh.noaa.gov/rah/criteria/